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Statement for the Record

BioScience and the Intelligence Community (Part 2): Closing the Gap

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INTRODUCTION

Thank you Mr. Chairman, Mr. Vice Chairman and members of the Committee for inviting me today. I would like to briefly address the role of bioscientists in our intelligence processes and, in particular, the BioChem 20/20 initiative and other Agency outreach efforts to the bioscience community designed to help us accomplish our mission.

Many longstanding challenges exist today, such as integrating the science and intelligence communities on biological warfare (BW) issues, increasing communication between the intelligence and the life science and chemical communities, and improving the interactions between technical experts and intelligence analysts in defining and assessing the current and future threat. US Intelligence faces the continuing task of rapidly identifying, prioritizing, and addressing the wide variety of technical knowledge gaps facing BW analysts. Emerging threats such as avian influenza and the potential for biotechnology surprise or genetic engineering of BW agents pose significant additional challenges for intelligence analysis and collection.

Based on the WMD COMMISSION report's recommendations, the DNI proposed to take several specific measures aimed at better collaboration between the intelligence and biological science communities. DIA has focused its attention on the BW threat and has been engaged with a group of leading life scientists from academia, industry and government in an endeavor referred to as BioChem 20/20.

BACKGROUND

By way of background, on 25 November 1998, Defense Intelligence Agency established BioChem 20/20 as an ad hoc element within DIA's Counterproliferation Support Office, the leading analytic element in the Directorate for Analysis. The mission of BioChem 20/20 is to lead and focus the Defense Intelligence Community's assessments to anticipate the impact of advancing technologies on the biological-chemical warfare threat. BioChem 20/20 focuses on evaluating new technologies that nation-states or terrorists could exploit to present an array of potential threats to harm humans, plants, animals or materiel.

BioChem 20/20 initiative consists of A Committee of Experts (ACE) of more than 20 leading scientific and technical (S&T) experts and a select team of DIA and CIA biological warfare analysts. These scientific experts work closely within the BioChem 20/20 in assessing cutting-edge technologies that could be used to produce unique and deadly agents, write papers and assessment on technology and bioscience developments as well as lead and participate in discussions on these topics with our analysts.

The ACE members on BioChem 20/20 serve as S&T experts identifying critical technologies and processes that are not usually considered as part of the emerging threat.

Studies generated by BioChem 20/20 emphasize potential threat technologies looking out over the next decade and not previously available or understood by US Intelligence. BioChem 20/20's composition consists of scientific and technical personnel from US Intelligence and government entities such as Department of Homeland Security, Environmental Protection Agency, Department of Agriculture, United States Army Medical Research Institute of Infectious Disease, National Institute of Health, Edgewood Chemical and Biological Center, Lawrence Livermore and Los Alamos National Laboratories, National Science and Technology Council, and the Defense Advanced Research Projects Agency.

Since 1999, the BioChem 20/20 group has published over 30 papers in categories including: emerging infectious diseases and technologies; delivery mechanisms (conventional and innovative); novel agents; scenarios and proliferation of BW related items. These publications are the result of collaboration among our chemical and biological analysts and the ACE, and they attempt to identify and characterize dual-use technologies and concepts that could enable an adversary to develop unexpectedly effective new CBW agents. These analysts and the ACE assess the potential for foreign offensive programs to exploit the identified technologies and concepts, including developing, weaponizing, delivering, and disseminating biological and chemical warfare agents. We share these assessments with the collection community to enable them to identify foreign efforts to take advantage of emerging scientific and technological capabilities. BioChem 20/20 papers are classified and designed to alert policymakers and the research and development and acquisition communities to possible trends and developments in biological and chemical warfare. The papers are widely distributed to include allied countries.

The ACE members on the BioChem 20/20 are compensated only for their travel, meals, accommodations, and related expenses while participating in the quarterly BioChem 20/20 executive meetings as well as being available for consultation and support year round. The initial BioChem 20/20 meeting was held on the 16 December 1998 at the DIAC. Our last meeting was held at Patrick Air Force Base, Florida on and 17 and 18 January 2006. While ACE members currently hold a secret collateral or higher clearance, we are in the process of upgrading all ACE members to carry Top Secret clearances.

- BioChem 20/20 was requested to help organize and participate in a workshop sponsored by the National Academies' National Research Council addressing the impact of biotechnology on the future of bioterrorism.

- BioChem 20/20 drafted the futures section of the 2003 BW NIE and produced an Emerging Technology Capstone Threat assessment.

- BioChem 20/20 was specifically called out in the WMD Commission report as a valuable US Intelligence program.

The Jefferson Program, another DIA initiative, was established to mitigate technological surprise in the area of bioweapons, toxins, advanced biochemicals, and related activities resulting from emerging developments in offensive chemical and biological warfare programs. This program evaluates and characterizes agents, technologies, and foreign infrastructure. In addition, an expert forum meets periodically to discuss future threats. The Jefferson Program maintains an online unclassified repository containing CBW related information that is shared throughout US Intelligence. All tasks under the Jefferson Program have an intelligence basis and are intended to address analytic intelligence shortfalls. The key focus areas are:

- Chemical and Biological Agents: The potential of foreign agents and weapons is assessed through analysis of known or suspected infectious organisms, toxins, or advanced biochemical agents. The distribution of known BW pathogens is assessed to assist in differentiating naturally occurring outbreaks from accidental releases from a state program or intentional use such as in a bioterrorism event. An Avian influenza study will provide a baseline of scientific information from which analysts will be able to identify gaps, drive collection requirements and better assess threats.

- Technologies: The capabilities of foreign countries to convert existing conventional weapons or dual-use devices for CBW use and potential advances in CBW agent delivery are evaluated. These assessments enable analysts to obtain a reliable and secure technical evaluation of foreign material. Current activities include BW analyst technical training and scientific seminars taught by leading scientists from outside US Intelligence and onsite visits to biotechnology-related facilities.

- Infrastructure: The biotechnological production potential of select foreign countries with known, suspected, or potential offensive BW programs is characterized.

- Biological and Chemical Warfare Online Repository and Technical Holdings System (BACWORTH 2): A searchable online database containing agent information and full text scientific and technical documents pertaining to CBW related materials is maintained by DIA and shared throughout US Intelligence, Department of Defense, Defense Threat Reduction Agency, Military Commands, Department of Health and Human Services, and the Department of Homeland Security.

As part of DIA's core knowledge and threat assessment, we have initiated several efforts to help close intelligence gaps including:

- Augmenting select DIA HUMINT field operating elements with analytic personnel who are Bio Science subject matter experts that can guide and focus

collection activities against the highest priority BW targets, improve source vetting, and develop new leads and sources thru better HUMINT targeting;

- Establishing a DIA HUMINT WMD/Counterproliferation Issue Management division to oversee HUMINT collection issue related to the CBW functional are and to further analyst-collector integration, as well as CIA/DIA coordination;
- Assigning DIA HUMINT targeteers to select DI analytic elements as well as DIA field activities to enhance collection against CBW target sets;
- Promoting greater collaboration between analyst and collector; and among analysts, law enforcement, and scientific experts in academia, industry, and the US Government;
- Collaborating with the National HUMINT Collection Requirements Tasking Center, US intelligence experts and scientific experts in academia and industry to develop technical collection support guides on avian influenza and other bio-threats;
- Expanding liaison relationships with our close allies;
- Establishing liaison relationships with friendly countries that are not currently engaged on a scientific and technical level;
- Developing more forward-looking analyses to understand scientific trends that may be exploited by adversaries to develop BW and to position collectors ahead of the problem;
- Defining the relationship between US Intelligence (IC), the Department of Homeland Security (DHS), and the Federal Bureau of Investigation (FBI) to help create and maintain a national technical BW database;
- Improving capabilities to collect and analyze global medical intelligence by engaging with scientific experts in academia and industry to acquire data on natural distribution of known BW agents, characterize bio-threats risk distribution, database information on foreign medical and veterinary pharmaceutical capabilities, model foreign nations' medical response capabilities, and provide in-depth technical guides to assist in intelligence collection against bio-threats.

Considering the future, DIA will need to:

- Consider how best to partner with other entities to directly serve customers for BW intelligence, including information on research, development, and acquisition elements outside of OSD and the combatant commands.
- Exploit the long-term collection opportunities with greatest potential to provide insight regarding foreign BW capabilities and intentions

CONCLUSION

The Defense Intelligence Agency's BioChem 20/20 project and similar initiatives are helping to provide US Intelligence with a cleared panel of external technical experts in the life sciences and associated fields to assist our analysts and collectors to more fully understand indications of emerging biological threats. BioChem 20/20 is probably the

Intelligence Community's most effective initiative for collaboration between S&T analysts and external world-class experts.

Building on the BioChem 20/20's mission, we believe, can further enable US Intelligence whether that be for a greater level of in-depth external experts review of our products, development of methodologies and assessments, support to "red teaming", or seeking creative approaches to helping us discover advances in the biological and chemical sciences that may facilitate foreign/hostile offensive CBW programs.

Ultimately, as a result of close and sustained interaction with the bioscience and technical communities through programs like BioChem 20/20, US Intelligence can better address underlying challenges facing its counter CBW mission.

I look forward to your questions.